

REMARKS/ARGUMENTS

In the Advisory Action of July 12, the Examiner has indicated that the amendments proposed in the non-entered Amendment after Final are sufficient to overcome the section 112 second paragraph rejection as set forth in the final rejection. However, the Examiner concluded that the proposed amendments do not overcome the prior art rejection based upon the Smith reference. In addition, the Examiner indicated that the term "consisting essentially of" will be construed as equivalent to "comprising". In this response, Claim 1 has been amended as shown in the non-entered Amendment after Final, except that the transitional phrase now recites "consisting of". Favorable reconsideration by the Examiner is requested in light of these amendments and the remarks which follow.

In the previous Final Rejection, claims 1-6 were rejected under 35 U.S.C. § 103(a) as being obvious over Smith et al. U.S. Patent No. 6,060,145. The Examiner noted that the Smith et al. reference employs a "conventional secondary backing" for the base of its inventive modified secondary backing. From this, the Examiner concluded that secondary backings of the claimed weave construction were "conventional" in the art or known prior to the Smith et al. invention. The Examiner's conclusion in this regard is not supported by the facts. Reconsideration and withdrawal of this ground of rejection are respectfully solicited.

Applicant respectfully submits that the Examiner has failed to properly establish a *prima facie* case of obviousness based upon the Smith et al. reference. To establish a *prima facie* case of obviousness, it must be shown that the prior art references must teach or suggest ***all of the claim limitations***. It also must be shown that there is some ***suggestion or motivation***, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to arrive at the claimed invention. It is respectfully submitted that these requirements have not been met and, therefore, a *prima facie* case of obviousness has not been established. Only after a case of *prima facie* obviousness has been established is it necessary for the applicant to present evidence of unexpected results or other secondary considerations evidencing nonobviousness.

Contrary to what was alleged by the Examiner, the specific weave construction defined in Claim 1 is not “conventional” in the art, nor is it taught in the Smith et al. reference. The secondary carpet backing as defined in Claim 1 consists of a woven fabric having:

- a flat weave construction
- of warp tapes and multi-filament picks
- an average of about 12 to about 24 warp tapes per inch providing
- 50 to about 100% theoretical warp coverage
- but less than full effective warp coverage
- an average of about 10 to about 20 multi-filament picks per inch
- the flat weave construction comprising a plain weave
- the fabric having a weight of about 1.5 to about 7 osy and
- an average air permeability of at least about $250 \text{ ft}^3/\text{min.}/\text{ft}^2$.

The “conventional secondary backing” referred to by Smith et al. is indicated by the reference character 15 in FIG. 1 and is used as a component in producing the inventive modified secondary backing illustrated in FIG. 6 and discussed in greater detail in the patent specification. As seen from Table 1, the scrim fabric 15 is of an *open weave construction* with a very high air permeability. This open weave construction is important to the inventive modified secondary backing of the Smith et al. invention.

As described at column 3, line 64 to column 14, line 1, the secondary scrim fabric 15 that is utilized in the Smith et al. invention is a leno weave fabric comprising 16 ends/inch in the warp direction by 5 picks/inch in the weft direction. A fabric of this construction does not meet the requirements of Claim 1 as outlined in the bullet points above. In particular, the Smith et al. patent does not teach that this fabric is a flat weave construction of warp tapes and multi-filament picks. Nor does Smith et al. contain any teaching of the weave construction should provide 50 to about 100% theoretical warp coverage but less than full effective warp coverage. Nor does Smith et al. teach having an average of about 10 to about 20 multi-filament picks per inch.

In fact, a commercial secondary backing of the type described in the Smith et al. patent is identified in Table 2 of the present application. Note in Table 2 the fabric sample identified as

“3870”. It is a 16 by 5 leno weave backing having a basis weight of 2.1 osy. This compares closely to the fabric described by Smith et al. As seen from Table 2 of the present application, it has a warp coverage of less than 40 percent. This is significantly less than the theoretical warp coverage specified in Claim 1. It also has a pick count of only 5/inch, which is well below the 10-20 specified in Claim 1.

Table 2 also describes the properties of other “commercial secondary backing” samples. ActionBac® Style 3808, an 18 x 13 leno weave backing also had a warp coverage significantly less than that specified in Claim 1. the sample designated as XX, a discontinued 24 x 15 plain weave fabric, had a warp coverage in excess of the upper limit permitted by claim 1 and an air flow well below that specified in the claim. Likewise, the sample designated as YY, a needled 24 x 15 plain weave fabric had a warp coverage in excess of that specified by claim 1 and an air permeability well below the claim 1 requirements. Thus, all of the so-called “commercial secondary backing” samples are outside of the parameters specified in claim 1. Hence, the Examiner’s conclusion that the weave construction claimed by applicant is “conventional” in the art or known prior to the Smith et al. invention is inconsistent with the clear teachings of the Smith et al. patent.

Example 19 of the present application compares a similar commercial secondary backing (ActionBac® style 3865 which differed only in color from the style 3870 of Table 2) with a secondary carpet backing of a weave construction in accordance with the present invention. As is seen from Example 19 paragraph [0067] and as is confirmed by the Gardner declaration, paragraphs 15 and 16, secondary carpet backing made in accordance with the parameters of the claimed invention yield unexpected results such as an increase in dimensional stability or delamination resistance.

Table 2 also describes properties of a number of other secondary weave constructions that are not conventional and not part of the prior art, but which were produced specifically for the purpose of illustrating the significance of the weave construction parameters defined by claim 1. Note that fabric samples A, B, and C all had theoretical warp coverage above 100% and air permeability values below 100. Those permeabilities are not suited to efficient binder cure rates. These examples demonstrate that the particular combination of weave parameters defined

in claim 1 are important and significant in achieving the improved results described and illustrated in the present patent application.

In addition, claim 1 now specifies a secondary carpet backing consisting of a *single layer of* woven fabric and possessing the previously noted weave construction parameters. The Smith et al. patent does not teach such a structure. The multi-layer construction of the secondary carpet backing taught by Smith et al. is essential to his invention.

Applicant has identified a particular weave construction, defined by the combination of parameters set forth in the claims, that yields improved results relative to the prior commercially available secondary backing constructions. This combination of weave construction parameters is not described or taught by the Smith et al. patent. Simply put, the Smith et al. patent *does not teach all of the limitations set forth in claim 1*. This deficiency of the prior art in teaching all of the claim limitations was noted in the arguments accompanying the Amendment after Final. Neither the Final Rejection, nor the Examiner's comments in the Advisory Action have attempted to address where the combination of weave construction parameters as set forth in claim 1 is found in the prior art.

Furthermore, the particular combination of weave construction parameters as set forth in claim 1 would not have been intuitive or obvious from the prior art. Nothing in the Smith et al. patent or within the general knowledge of the person of ordinary skill in the art would direct or incite someone to select, out of all of the possible properties that could define a weave construction, the specific combination as recited in claim 1 of (1) a flat weave construction, (2) the use of warp tapes and multifilament picks, (3) the density or spacing of the warp tapes, (4) the theoretical warp coverage, (5) the density or spacing of the picks, (6) use of a plain weave of a single layer, (7) fabric basis weight, and (8) average air permeability. Furthermore, nothing either in the Smith et al. patent or within the general knowledge of the person of ordinary skill in the art would direct someone to utilize the specific combination of *values* of these parameters as set forth in the claims. Claims 2 to 6 define more specific parameters of the weave construction, such as tape width, pick denier, etc. These also are not taught by or obvious from the prior art.

In responding to Applicant's previous arguments, the Examiner has noted that Smith et al. also teaches other fabrics having different counts and/or weaves, including plain weave

fabrics for example. However, as seen from the previous discussion of Table 2 of the present invention, other fabrics having different counts and/or weaves, including plain weave fabrics, do not necessarily have the weave construction defined by the combination of parameters set forth in claim 1. The commercial secondary backings analyzed in Table 2 do not meet the claim parameters. Nor do fabric samples A, B, C, D, E, F, GI and H of Table 2.

Furthermore, the Smith et al. teachings at column 14, lines 13-22 are quite relevant and instructive. Smith notes that while other weave types can be used, “what is important to the practice of the invention is that the scrim fabric and fiber batt become integrated to form the modified scrim 20.” The only specific example given in the Smith et al. patent is an open weave fabric with a pick count of 5/inch. Thus, following the Smith et al. teachings, persons of ordinary skill in the art would be instructed to use a scrim fabric with an *open weave construction*. As noted earlier, the sample used by Smith has a theoretical warp coverage lower than that specified in the claims and a pick count well below the claimed range. Additionally, the Smith et al. reference specifically teaches a *multi-layer* backing construction. Consequently, the teachings in the Smith et al. reference actually *teach away* from producing a single layer fabric with 50-100% theoretical warp coverage, but less than full effective warp coverage and a pick count of 10-20 per inch.

From the foregoing, it should be evident that the Smith et al. patent not only *fails to teach or suggest all of the claim limitations* recited in Claim 1; additionally, it *fails to provide any suggestion or motivation to modify* the reference to arrive at the claimed invention. Moreover, Smith et al. explicitly teaches the need for having multi-layer fabric with an open weave construction. Thus the Smith et al. reference actually *teaches away* from the specific combination of fabric construction parameters that are set forth in independent Claim 1.

Thus, it is clear that the reasoning as stated in the previous Final Rejection fails to satisfy the essential touchstones of a prima facie obviousness rejection. It fails to teach all of the claim limitations, there is lacking any motivation for modifying the Smith et al. teachings, and the Smith et al. teachings actually lead away from the invention defined in the claims. Accordingly, the Smith et al. reference cannot properly form the basis for an obviousness rejection.

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Reconsideration by the Examiner, withdrawal of the rejection and formal notification of the allowability of Claims 1-6 as now presented are solicited.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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